Perhaps I am mistaken, but it has struck me in running through this volume that this very necessity for close examination into minute details in working out the species of Pyralidæ has had what most lepidopterists will consider a beneficent effect, in reducing the long strings of synonyms which are met with continually in the earlier volumes of the Moths. In Volume IV. they appear chiefly in the boldly marked groups, such as *Nymphula* in the Hydrocampinæ. However, in a work which will be an undoubted boon, not only to all collectors in the East, but to all living lepidopterists, it is hardly fair to criticize the author's views respecting the limits of species: if he concludes that the species of certain genera are subject to unlimited variation combined with very extensive geographical distribution, he has, by his unwearied industry, earned a full right to his opinions.

Taken as a whole, the four volumes of the Moths of India have, without question, been worked out in so masterly a manner and are so infinitely superior as text-books of families and genera to anything previously produced, that they must necessarily give a great impetus to the study of Heterocerous Lepidoptera.

A. G. Butler.

The Parasitic Diseases of Poultry. By Fred. V. Theobald, M.A., F.E.S. London: Gurney & Jackson, 1896. Pp. xv & 120.

This little book should prove useful not only to poultry-rearers but also to the scientist and veterinarian. It opens with an introductory chapter on parasites and parasitism in general, at the conclusion of which the author rightly insists on the importance of cleanliness and healthy surroundings for poultry—items too much neglected by the majority of poultry-keepers. For the purpose of description, the Parasites are divided into Animal and Vegetable; and the Animal Parasites are subdivided into (1) Protozoan Parasites, (2) Insect Parasites (fleas, lice, &c.), (3) Mite Parasites, and (4) Worm Parasites. These are again divided into their natural groups, and under each group the symptoms and appearances of the diseases, the parasites producing them, with their life-histories and mode of distribution, and the means of prevention and treatment, are fully dealt with. The last should be very valuable, especially as it is the outcome of the author's own experience; it would have been better, however, to have used the term "lime-washed" throughout, instead of, in most instances, the somewhat loose one, "whitewashed."

Commencing with Diphtheritic Roup, the opinion is expressed that though there may be three varieties of this affection, it is generally protozoan in nature. Its extreme contagiousness is certainly against this view, and such authorities as Cornil and Babes and Löffler favour the bacterial theory of its origin. On page 6 "Cornet" is evidently a misprint for "Cornil."

Passing to the Vegetable Parasites, the author does not seem to be so much at home as with the Animal. They are divided in rather a curious way, viz.: (1) the Dermatophytes, or cutaneous parasites, (2) the Perisporiaceæ or "Moulds," and (3) the Saccharomycetes. An *Aspergillus* is described as "formed of thin colourless filaments forming a matted layer or thallus, and a looser mass above, the so-called aerial mycelium." By the inoculation of the spores of *A. fumigatus* it is stated that "tuberculosis of the liver and lungs takes place." Although the next sentence renders the author's meaning clear, it is to be regretted that the term "tuberculosis," which is now applied only to a specific disease, should be used in an anatomical sense. The bacterial diseases are not described, as the author considers that they should be separately dealt with. Two appendices (one a complete list of the parasites attacking *Gallus domesticus*, the other a bibliography) and a good index complete the volume, which is illustrated with many capital woodcuts.

In spite of the blemishes mentioned above, the work supplies a distinct want and will prove a useful guide to the recognition and treatment of the parasitic diseases of poultry.

PROCEEDINGS OF LEARNED SOCIETIES.

GEOLOGICAL SOCIETY.

December 2, 1896.—Dr. Henry Hicks, F.R.S., President, in the Chair.

The following communications were read:—

1. 'On the Affinities of the Echinothuridæ, and on *Pedinothuria* and *Elikodiadema*, two new Subgenera of Echinoidea.' By J. W. Gregory, D.Sc., F.G.S.

The Author summarizes and discusses the literature bearing upon the Echinothuridæ, and brings forward arguments to prove that the family is a member of the order Diademoidea, and is derived from the Pedinidæ, members of which are found in earlier rocks than the Corallian, which contains the oldest member of the Echinothuridæ, namely, *Pelanechinus*. He maintains that the extreme flexibility and loose articulation of the plates of the living genera *Asthenosoma* and *Phormosoma* is due to the diminished calcification of the plates, and that these recent genera are extremely specialized forms, and not primitive,—the apparently primitive features of the family being secondarily acquired, not primæval.

A description is given of forms belonging to two new genera, described as *Pedinothuria*—a connecting-link between the Pedinidæ and Echinothuridæ; and *Elikodiadema*—which has a flexible test, is